



## **PROGRESS REPORT NO. 172**

**TO:** Robert Tan, U.S. Environmental Protection Agency (EPA) – via Electronic mail  
Kathryn Cerise, EPA – via Electronic mail

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**Cc:** Kris McCaig, TAI – via Electronic mail  
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**DATE:** November 12, 2020

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**RE:** Upper Columbia River (UCR) Remedial Investigation/Feasibility Study  
(RI/FS) - Progress Report No. 172 Month Ending October 2020

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Pursuant to Paragraph 39 of the June 2, 2006 Settlement Agreement (Agreement), the following is intended to provide a summary of activities completed during the past month in compliance with the aforementioned Agreement. It is also intended to provide a brief summary of pending and on-going activities.

Soil Amendment Technology Evaluation Study (SATES):

TAI continued coordination with the SATES team and Robert Tan, Remedial Project Manager for the Region 10 Superfund & Emergency Management Division, during the month.

The Ohio State University (OSU) laboratory completed the analysis of the Phase II bench-scale testing time point 3 (t3) soil samples collected on March 11, 2020. As of this writing, OSU delivered the preliminary results to TAI and the data are being validated by the third-party data validator. TAI will deliver the t3 results to EPA after the data review and validation are complete. These results will be incorporated into the draft Phase II Data Summary Report (DSR) currently being prepared for the study. TAI is coordinating the field work with EPA, representatives of the Confederated Tribes of the Colville Reservation, and other members of the SATES technical team. Mobilization of the field team for amendment application started on November 3, 2020.

TAI participated on a technical working group call, coordinated by EPA, on October 29, 2020 to discuss how phosphorus treatment of soil to reduce lead bioaccessibility might affect arsenic bioaccessibility and mobility in soil, and uncertainties thereof. This was the second of what will likely be a series of calls on this topic.

#### Baseline Ecological Risk Assessment (BERA):

Weight of evidence (WOE) –TAI focused on preparing the WOE example using the Tri-State Mining District dataset recommended by EPA to demonstrate the WOE approach agreed upon by TAI and EPA. As of this writing, TAI distributed materials demonstrating the example to EPA’s team on November 2, 2020 for discussion with EPA on November 10, 2020.

Soil Toxicity Reference Values (TRVs) – TAI continued work on development of soil TRVs, following receipt of EPA’s approval of the upland soil background assessment on July 15, 2020. TAI’s work focused on implementation of Steps 1 through 6, as described in the “Final Approach for Evaluating the Potential for Metals Toxicity to Plants and Invertebrates in the Baseline Ecological Risk Assessment (May 2019).” TAI provided a draft technical memorandum to EPA on September 18, 2020, which presented results of Steps 1 through 6.

#### 2019 Phase 3 Sediment Study:

Benthic Macroinvertebrate (BMI) Data Analysis – EPA provided a BMI Discussion Summary Memo to TAI on September 8, 2020 that summarized the details of the collaborative engagement between TAI and EPA related to the analytical approach for the 2019 Phase 3 Sediment Study benthic macroinvertebrate community data. The memo also outlined EPA’s expectations for the approach to be used by TAI. TAI provided a memo to EPA on September 16, 2020 stating agreement with EPA’s BMI discussion summary and indicating that TAI has a clear understanding and the needed information to conduct the BMI community data analyses and present the results in the BERA.

Backscatter Electron Microscopy (BSEM) –TAI provided a revised draft final BSEM data report to EPA on October 16, 2020 in response to EPA’s September 16, 2020 comments. As of this writing, EPA approved the revised final draft BSEM data report on November 2, 2020. The final BSEM data report will be included as an Appendix to the draft 2019 Phase 3 Sediment Study Data Summary Report (DSR).

Toxicity Identification Evaluation (TIE) Pilot Study –TAI presented and discussed the results of additional experiments conducted in August 2020 to EPA’s technical team on a call on October 8, 2020. TAI initiated preparation of the addendum to the Draft TIE Pilot Study report (submitted to EPA on September 19, 2019). This report addendum will be focused on the additional tests performed since March 2020. TAI is on target to deliver the addendum to EPA by November 23, 2020.

Bioassay Testing – EPA provided comments to TAI on data validation files and reports for the UCR 2019 Phase 3 Sediment Study with bioassay-related sediment chemistry that were posted for EPA quality assurance review in August; one set of comments on September 8, 2020, and another on September 23, 2020. TAI provided responses to EPA's comments on September 8, 2020 and September 24, 2020, respectively. The bioassay biological endpoint and bioassay porewater and sediment analytical chemistry was transmitted to EPA on October 30, 2020. The bioassay biological laboratory data report will be included as an appendix to the draft 2019 Phase 3 Sediment Study DSR.

2019 Phase 3 Sediment Study Data Summary Report (DSR) – TAI continued to work on the draft DSR, which will be submitted to EPA on or before January 4, 2021.

Human Health Risk Assessment – TAI provided information on Teck Metals Ltd.'s Northport and Columbia Gardens air quality monitoring stations to EPA via email on October 16, 2020, in response to EPA's request for information sent via email on September 14, 2020.

Should you have any questions or require any additional information, please do not hesitate to contact me at 509-623-4515.